

84. The communication system according to Claim 80, wherein the common bus comprises a data-in line, a data-out line, a clock line when the master is running under the Serial Peripheral Interface protocol.

85. The card according to Claim 74, wherein one or more of the cards is a memory storage device.

Please add the following new claim:

--86. The card according to Claim 74, wherein each of the cards selects said one protocol for operation in response to initialization when connected to the host.--

REMARKS

These remarks are in response to the final Office Action mailed on September 20, 2001, and for which a one-month extension is hereby requested. In the Office Action, all of the pending claims, claims 1-85, were rejected under 35 U.S.C. 103(a) as being unpatentable over the single reference of Iijima, U.S. Patent No. 5,349,949, or Iijima and a secondary reference in the case of two of the claims. Although it is respectfully submitted that these rejections are not well founded for all these claims, claims 1-65 have been cancelled to facilitate the application process. Additionally, new claim 86 has been added.

The Office Action claims that the previous Amendment states that material found in the "The MultiMediaCard System Specification" is essential material. This is a mischaracterization of the Remarks in the previous Amendment. As stated there, it is believed that the features noted by the Office Action are already contained in the figures of the application; namely, the connections between the host and cards are shown in Figures 1 and 3, with card detail in Figure 2 and the signals whereby the process is transparent to the host in Figures 4-8. In any case, the claims with which these objects arose have been cancelled in the present Amendment in order to facilitate the application process.

The Office Action also states (beginning on the last line of page 2) that the "examiner notes the applicant failed to challenge the official notice thus the applicants agreement with the official notice is appreciated." This statement is incorrect. The previous Amendment, at which time claims 1-65 were pending, explicitly challenged the Official Notice of the Office Action of May 2, 2001. As claims 28-65 had been added in the previous Amendment (February 16, 2001), this was the first Office Action on these claims; concerning

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP

3 EMBARCADERO CENTER
SUITE 2800
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

claims 1-27, this was the first Office Action in which the independent claims had been rejected under 35 U.S.C. 103, the rejection under 35 U.S.C. 102(b) of the previous Office Action having been withdrawn. As for the currently pending claims added in the previous Amendment that accompanied the RCE, claims 66-85, the current Office Action is the first to deal with these claims and the Official Notice is again challenged below. (Again, claims 1-65 have been cancelled in the present Amendment to facilitate the application process.)

On pages 2 and 3 of the Office Action, a number of cases are cited. In particular, as noted on the last line of page 3 and on to the first line of page 4, “*there must be some teaching, reason, suggestion, or motivation to combine existing elements...*”; as the added emphasis shows, it is improper just to assert that missing elements or motivations are obvious. The elements and motivations, teachings, or reasons must be present. Although it is not necessary that the combination presented by the Office Action be suggested, “*there must be some teaching, reason, suggestion, or motivation to combine existing elements...*”. It is respectfully submitted that these elements and motivations, teachings, or reasons are lacking in the Office Action and that the rejections under 35 U.S.C. 103(a) are not well founded.

Turning to the specific rejections of currently pending claims 66-85, aside from claims 69 and 73 that are discussed further below, these claims were rejected for the same reason as the earlier pending claims had been rejected in previous Office Actions despite these claims having additional features not found in these earlier claims; in fact, aside from adding the additional claim numbers, the same text has been used and the added features or these claims not remarked upon or found in the prior art. In addition, they are rejected upon the single reference of Iijima.

Claims 66-68, 70-72, and 74-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (5,349,949). These rejections under 35 U.S.C. 103(a) over only Iijima as a single reference are respectfully traversed. In addition to the errors noted below, it is admitted in the Office Action that these claims recite some feature which the Iijima patent “does not teach.” Yet there is no further reference or other evidence of prior art presented to demonstrate that the overall claimed combinations including the elements missing from Iijima would have been obvious. The Office Action either summarily states that “it would have been obvious” to add the missing element to Iijima in order to meet the terms of the claims, or “Official Notice” is taken that the elements missing from Iijima were “well known” and would have been obvious to include in the claimed combinations. In either case, assumptions have improperly been made by the Examiner as to what one ordinarily skilled in the art would

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP

3 EMBARCADERO CENTER
SUITE 2800
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

have found obvious at the time of the application to do since there is no supporting evidence provided in the Office Action. It is respectfully submitted that these rejections do not make the necessary *prima facie* case of obviousness, and that, on that basis alone, the rejection of claims 66-68, 70-72, and 74-85 must be withdrawn.

More specifically, claims 66-73 that were added in the previous Amendment filed with the RCE are drawn to the aspect of the present invention described in the portion from page 5, lines 12-18, of the application. These claims contain the feature that (independent claim 70)

in response to the host initiating in the first protocol an initialization procedure for the connected card, the card selecting and operating in the first protocol

with similar language in independent claim 66.

The description of Iijima makes it clear (column 3, lines 57-59) that "one of the plurality of protocols supported by the IC card is selected by the external device 7." Similarly, column 4, line 46, to column 5, line 58 states: "Data communication processing of IC card 1 under the condition that IC card 1 supports two different communication protocols and *one of them can be designated by the external device...*[emphasis added]".

In contrast, in the present invention it is the card which selects the protocol. This process is described, for example, on page 5, lines 12-18, of the present application:

The present invention is directed to a multi-mode card design so that the card according to the present invention is able to communicate with hosts running in different communication protocols. The selection of communication mode is detected and determined by the card at the initialization. Specifically, the host does not need to provide the card with additional mode information. By simply plugging the card to the host, the card can detect, determine, and operate in either one of these two modes of operation.

As noted above, in independent claims 66 and 70 it is the card that selects the protocol as part of the initialization process, a method that is transparent to the host and contrary to the teachings of Iijima. Therefore, pending claims 66-73 are additionally believed allowable for these reasons.

Claims 74-85, that were also added in the previous Amendment filed with the RCE are drawn to the aspect of the present invention allowing the simultaneous connection of multiple cards to the host, as described above with respect to the use of a select signal. The teachings of Iijima neither describe nor suggest the use of or extension to multiple cards being simultaneously connected to the host, an extension whose implementation is believed to far

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP

3 EMBARCADERO CENTER
SUITE 2800
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

from obvious. In particular, the teachings of Iijima are based upon only the use of only a single card with the master as Iijima uses a set of signals that are not compatible with multiple cards simultaneously connected are not believed to be readily extendible to be usable in this manner. It is respectfully submitted that such an extension is not obvious.

In contrast, the present invention provides for multiple cards, as shown in Figure 1 for the MMC case and for the SPI case in Figure 3. This is implemented through the use of a select signal of the SPI case is shown in Figure 3 (CS from SPI bus master to each of the cards) and is a basic part of the MMC protocol. It should be noted that this is not just a simple case that if one card works (which is also not believed to follow from Iijima as, among other reasons, here the card adapts), it would not readily extend to multiple cards as the bus structure and control signals are not found in nor obvious from the cited art. Consequently, claims 74-85 are additionally believed allowable for these reasons.

Claims 69 and 73 depend respectively upon claims 66 and 70 and are consequently believed allowable for the reasons stated above. These claims are believed further allowable for having "a distinct bus is utilized for each of the plurality of communication protocols." The MMC and SPI protocol use distinct buses as described with respect to Figures 1 and 3 of the present application. Iijima relies on a single physical bus for both of its protocols, which is not an accurate assumption for or the example of MMC and SPI protocols, as it is based on all of the protocols being able to share a common explicit reset and a single sequence. Thus, the present application is contrary to the teachings of Iijima in this aspect.

The Office Action further rejects claims 69 and 73 under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Mote, Jr. PN 5,852,617. The Office Action states:

In regards to claims 69 and 73: Iijima teaches one bus for communication. Iijima does not teach a distinct bus for each of the a plug-in card with two separate busses one for standard parallel communication and one for serial JTAG (error handling protocol) communication. With one protocol being serial and the other being parallel. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use separate bussed one for the serial protocol and one for the parallel protocol because this would have for dual communication.

It is unclear which of the elements missing from Iijima that these remarks are intended to provide from Mote. Mote does discuss the use of JTAG, but this is a boundary scan standard used to test portions of buses and its relevance here is unclear. Additionally, Figure 7 of Mote does show several plug-in cards 200 connected in series along a cables 710, 720, 735, ..., but

Mote is clear that this arrangement is for testing a bus structure and not for a host communicated with one or more cards. In particular, as near as can be determined from the Office Action's limited remarks, the host would likely be the JTAG test circuitry on the motherboard, but Mote clearly states (column 2, lines 64-66) that the "multiple bus connections do not electrically communicate with JTAG test circuitry on the motherboard", that is not the data and command transferal between the host and card as is the present application. Thus, the various elements found in claims 69 and 73 are again lacking and the combination of the elements that are there would be contrary to the teachings of the references. Therefore, claims 69 and 73 are further believed allowable for these reasons.

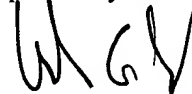
New claim 86 has been added. This adds the limitation that, as in claims 66 and 70, each of the cards selects the protocol for operation in response to initialization when connected to the host to the limitations of claim 74.

For any of these reasons, reconsideration of the Office Action's rejection of claims 66-85, and consideration of new claim 86, is therefore respectfully requested, and an early indication of their allowability is earnestly solicited.

EXPRESS MAIL LABEL NO.:

EV 052133149 US

Respectfully submitted,



Michael G. Cleveland
Reg. No. 46,030

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP

3 EMBARCADERO CENTER
SUITE 2800
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646